

## HOMEWORK 6

- Section 9.1 in the book: Exercises 16, 22, 24, 26.

**Problem 1.** Find the eigenvalues and the associated eigenvectors of the following matrices:

$$\begin{pmatrix} -1 & 2 \\ -7 & 8 \end{pmatrix} \quad \begin{pmatrix} 4 & 4 \\ 1 & 4 \end{pmatrix} \quad \begin{pmatrix} 3 & 0 & 0 \\ 0 & 2 & 0 \\ 4 & 0 & 1 \end{pmatrix}$$